

WHAT IS CLAIMED IS:

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5 1. ~~A flat panel display, comprising:~~

a system including an image processing part for deciding a timing format of an image data and generating a control signal for the image data, an encoder for encoding the image data and the control signal output from the image processing part in an RSDS specification, a power output part for outputting a constant-voltage; and

a display module including:

a control board including a power supply part for converting the constant-voltage of the power output part into a predetermined voltage level, a gray scale generating part for generating a gray scale voltage using the predetermined voltage level of the voltage converting part, a gate voltage generating part for generating a gate on/off voltage using the predetermined voltage level of the voltage converting part, and a transmission line for transmitting the encoded image data and the control signal;

a first connecting member having a data driver for generating a column signal when the image data, the control signal and the gray scale voltage are applied;

a second connecting member having a scan driver for generating a scan signal when the control signal and the gate on/off voltage are applied; and

~~a flat panel for forming a picture using the scan signal and the column signal.~~

20 2. The flat panel display of claim 1, wherein said data driver comprises:

a first decoding means for decoding the data and the control signal of the data;

a first register means for temporarily storing the data decoded by the first

decoding means; and

a first signal processing means for generating and outputting a column signal using the data stored in the first register means, the control signal and the gray scale voltage.

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3. The flat panel display of claim 2, wherein the data and the control signal are transmitted in a mixed signal within a single channel, are decoded by the first decoding means, are divided to be stored at a first register and a second register of the first register means, and are output to the first signal processing means.

4. The flat panel display of claim 2, wherein the data and the control signal are separately transmitted through respective corresponding channels, are respectively decoded by a first decoder and a second decoder of the first decoding means, are divided to be stored at a third register and a fourth register of the first register means, and are output to the first signal processing means.

5. The flat panel display of claim 1, wherein said scan driver comprises:

a second decoding means for decoding the control signal;

a second register means for temporarily storing the control signal decoded by

20 the second decoding means; and

a second signal processing means for generating a scan signal using the control signal stored in the second register means and the gate on/off voltage.

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6. ~~A flat panel display, comprising:~~

a signal converting board including an analog/digital converter for converting an analog data having an analog format and for forming a picture and a control signal for the analog data into a digital data and a digital control signal, an image processing part for deciding a timing format of the digital data and generating a control signal for the digital data, and an encoder for encoding the digital data and the digital control signal output from the image processing part in an RSDS specification; and

a display module comprising:

a control board including a power supply part for converting a constant-voltage into a predetermined voltage level, a gray scale generating part for generating a gray scale voltage using the predetermined voltage level of the voltage converting part, a gate voltage generating part for generating a gate on/off voltage using the predetermined voltage level of the voltage converting part, and a transmission line for transmitting the encoded image data and the control signal;

a first connecting member having a data driver for generating a column signal when the image data, the control signal and the gray scale voltage are applied;

a second connecting member having a scan driver for generating a scan signal when the control signal and the gate on/off voltage are applied; and

a flat panel for forming a picture using the scan signal and the column signal.

7. The flat panel display of claim 6, wherein said data driver comprises:

a first decoding means for decoding the digital data and the digital control signal;

a first register means for temporarily storing the data decoded by the first

decoding means; and

a first signal processing means for generating and outputting a column signal using the data stored in the first register means, the control signal and the gray scale voltage.

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8. The flat panel display of claim 7, wherein the data and the control signal are transmitted in a mixed signal within a single channel, are decoded by the first decoding means, are divided to be stored at a first register and a second register of the first register means, and are output to the first signal processing means.

9. The flat panel display of claim 7, wherein the data and the control signal are separately transmitted through respective corresponding channels, are respectively decoded by a first decoder and a second decoder of the first decoding means, are divided to be stored at a third register and a fourth register of the first register means, and are output to the first signal processing means.

10. The flat panel display of claim 6, wherein said scan driver comprises:

a second decoding means for decoding the control signal;

a second register means for temporarily storing the control signal decoded by

20 the second decoding means; and

a second signal processing means for generating a scan signal using the control signal stored in the second register means and the gate on/off voltage.

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